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(54) TILTABLE MOP FRAME FOR CLEANING FLOORS, ETC.

KIPPBARER HALTER FÜR WISCHGERÄT ZUR REINIGUNG VON BÖDEN

STRUCTURE DE BALAI LAVEUR BASCULANTE DESTINEE AU LAVAGE DES SOLS, ENTRE AUTRES

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Description

TECHNICAL FIELD:

[0001] The present invention relates to a tiltable mop frame for cleaning floors, etc. of the kind which is commonly used especially for cleaning of surfaces in homes, in workplaces, public buildings, stairs, etc.

PRIOR ART:

[0002] Mops for above-mentioned purposes are well known and they consist principally of a plate on the underside of which the cleaning arrangement itself, for example a piece of fabric, is arranged, which plate on the upper side is hingeably joined to an elongated handle. The mops are usually used dry or in such a way that they are humidified or dipped into water and are pulled or pushed over a floor, whereby the dirt is partly dissolved and partly absorbed by the mop. The plate usually consists of aluminium or a similar light material, such as plastic. Hook and loop fastener "males" are usually inserted in grooves on the underside thereof. Before the mop is used, the plate with the hook and loop fasteners on the underside is pushed against the cleaning fabric which is to be used and the assembly is thereby finished. If the cleaning element is to be removed, one can press one's foot against it and tear off the aluminium plate without further inconvenience. The handle which is hingeably joined to the plate is usually a telescopic tube of such a length that the person who is to handle the mop can use both hands while in an upright position.

[0003] When the mop is used, it is pushed and pulled alternately over the surface that is to be cleaned. A certain pressure must be put on the mop by the person who is holding the mop handle but the main pressure is created by the weight of the mop.

[0004] A certain friction arises between the mop fabric and the surface to be cleaned, which friction is necessary for the purpose but must not be too great so that the user of the mop becomes exhausted or develops injuries. This friction is dependent on the fabric which is arranged on the underside of the mop. One example of such a fabric is disclosed in the Swedish patent 9403398-2.

[0005] Different types of mops are known. An example thereof is disclosed in the British Patent 1360882 which shows a trough- like holder of V-shaped cross-section for a sleeve or pad of cleaning material. The V-shaped construction of the holder is intended for simplifying the squeezing of washing liquid by means of a V-shaped device into which the holder is pressed.

[0006] Further examples of mops are described in the U.S Patent 3329988, 3012264 and 5426809 and the Swedish Patent 392031.

TECHNICAL PROBLEM:

[0007] When a mop with a plane underside is moved forwards or backwards on a dirty surface, that part of the cleaning fabric which is at the front in the direction of the movement will loosen and collect the dirt, whereas that part which is further or furthest to the rear collects a smaller part of the dirt and carries out no real cleaning work. When the direction of movement is reversed, the same occurs in reverse order. This means that a mop which has a certain width is used less for that part which lies between the dirt-collecting surfaces, which part can be close to half of the total lower surface of the mop. This is, of course, not desirable and gives a poor utilisation of the mop fabric.

[0008] The friction between the underside of the mop and the surface to be cleaned may sometimes also be larger than is desirable, which leads to the above-mentioned disadvantages. This friction is greater the greater contacting surface the mop has.

SOLUTION:

[0009] To remedy the above disadvantages and solve the problems which are connected with mops having a plane underside, a mop frame has been created according to the present invention for cleaning floors, etc. comprising an elongated plate which, with its other side provided with a cleaning cloth, is intended to be pushed forwards and pulled backwards over the surface which is to be cleaned, and an elongated handle hingeably joined to the upper side of the plate, which mop is characterized in that the underside of the plate is provided with an elongated protrusion extending crosswise to the forwards and backwards direction of the mop during use so as to divide the plate substantially down the middle into a first portion and a second portion, such that, when the mop frame is pushed the mop frame is tilted such that the cloth provided on the first portion will lie against the surface whereas the second portion will be swung up over the protrusion, and when the mop frame is pulled the mop frame is tilted such that the cloth provided on the second portion will lie against the surface whereas the first portion will be swung up. The elongated protrusion can be an edge between angled parts of the plate, whereby the angle can be up to 10°.

[0010] The elongated protrusion can further consist of a combination of an edge between angled parts of the plate and a bulge on the edge.

DESCRIPTION OF THE FIGURES:

[0011] The invention will now be described more in detail with reference to the attached figures, where:

Fig. 1 in a perspective view shows a conventional mop, where

Fig. 2 shows the conventional mop according to Fig. 1 from the underside, where

Fig. 3 shows from the underside the mop plate according to the present invention, where

Fig. 4 and Fig. 5 show a mop according to the invention seen from the short side.

DETAILED DESCRIPTION:

[0012] Fig. 1 shows a mop of conventional kind having a plane plate 1 to which a handle in the form of a telescopic tube is joined. The telescopic tube is joined on the upper side of the plate 1 by means of a joint 3 and the plate 1 can accordingly by swung around this joint. When the mop is used, it is pushed forwards or pulled backwards with one of the longer sides to the front.

[0013] Fig. 2 shows the underside of the plane plate 1 to which a cleaning cloth is attached and after this cleaning cloth has been used for a certain time. As appears from the figure, the dirt 4 is collected at the long sides to an increasing degree the closer one comes to these long sides, whereas the middle part of the mop cloth is mainly not used.

[0014] Fig. 3 shows an underside of the plate 1 of the mop according to the present invention without any attached cleaning cloth. On this underside strips 5 of hook and loop fasteners are arranged, which strips are intended to attach the cleaning cloth in a known way. At the middle of this plate an edge 6 is shown on the figure, which edge consists of a protrusion on the underside. This edge 6 can have been made as is shown in Figs. 4 and 5 by the plate 1 having been bent at a certain angle. As is shown in Fig. 5, this angle edge 6 may be further increased by an added bulge 7.

[0015] Figs. 4 and 5 are somewhat enlarged compared to Figs. 2 and 3. As appears from Figs. 4 and 5, a mop cloth 8 is attached to the underside of the plate and secured by the hook and loop fasteners 5.

[0016] When the mop according to Figs. 4 and 5 is to be used and it is pushed, for example, to the left in the figure, then the left half of the mop cloth will lie against the surface whereas the right half will be swung up and will accordingly be completely inactive. With a reversed direction of movement the right half will lie against the surface whereas the left half will be free. In this way the mop cloth 8 will be used also at the middle part since this part will lie against the surface with a greater force than at the edges. By letting the contact surface against the surface to be cleaned become smaller, the friction will also be decreased since this depends on a certain suction effect and this suction effect will of course be less when the surface is smaller.

[0017] The angle at which the plate 1 should be bent is not critical but it can suitably be between 0-10°. It can be 0 because a bulge 7 can in some cases be sufficient. The bulge can also be dispensed with or combined with an angle bending as is shown in Fig. 5.

Claims

1. Tiltable mop frame for cleaning floors, etc. comprising an elongated plate (1) which, with its underside provided with a cleaning cloth (8), is intended to be pushed forwards and pulled backwards over the surface that is to be cleaned, and an elongated handle (2) hingeably (3) joined to the upper side of the plate (1), **characterized in that** the underside of the plate (1) is provided with a longitudinal protrusion (6) extending cross-wise to the forward and backwards direction for the mop during use so as to divide the plate substantially down the middle into a first portion and a second portion, such that, when the mop frame is pushed the mop frame is tilted such that the cloth provided on the first portion will lie against the surface whereas the second portion will be swung up over the protrusion, and when the mop frame is pulled the mop frame is tilted such that the cloth provided on the second portion will lie against the surface whereas the first portion will be swung up.

2. Tiltable mop frame according to claim 1, **characterized in that** the longitudinal protrusion (6) is an edge between the first portion and the second portion, where said edge is a result of the first portion arranged with an angle to the second portion greater than 0° and maximum 10°.

3. Tiltable mop frame according to claim 1, **characterized in that** the longitudinal protrusion (6) is a bulge (7) when the angle between the first portion and the second portion is 0°.

4. Tiltable mop frame according to claim 2, **characterized in that** the longitudinal protrusion (6) is a combination of the edge and a bulge (7) arranged on the edge.

Patentansprüche

1. Kippbarer Halter für Wischgerät zur Reinigung von Böden, umfassend eine lange Platte (1), die mit einem an ihrer Unterseite vorgesehenen Wischtuch (8) über die zu reinigende Oberfläche vorwärts geschoben und rückwärts gezogen wird, sowie einen längen Stil (2), der gelenkig (3) an der Oberseite der Platte (1) befestigt ist, **dadurch gekennzeichnet, dass** die Unterseite der Platte (1) mit einem langen vorstehenden Teil (6) versehen ist, die kreuzweise zur Vorwärts- und Rückwärtsrichtung bei Gebrauch des Wischgeräts verläuft und die Platte im Wesentlichen in ihrer Mitte in einen ersten Abschnitt und einen zweiten Abschnitt untertellt, so dass das Wischgerät beim Schieben des Wischgeräthalters so gekippt wird, dass das auf dem ersten Abschnitt vorgesehene Wischtuch auf der Oberfläche aufliegt, während der zweite Abschnitt über den vorstehenden Teil nach oben gekippt wird, und dass das Wischgerät beim Ziehen des Wischgeräthalters so gekippt wird, dass das auf dem zweiten Abschnitt vorgesehene Wischtuch auf der Oberfläche aufliegt, während der erste Abschnitt nach oben gekippt wird.

2. Kippbarer Halter für Wischgerät entsprechend Anspruch 1, **dadurch gekennzeichnet, dass** es sich bei dem langen vorstehenden Teil (6) um einen Steg zwischen dem ersten Abschnitt und dem zweiten Abschnitt handelt, wobei dieser Steg sich daraus ergibt, dass der erste Abschnitt mit einem Winkel zum zweiten Abschnitt angeordnet ist, der größer als 0° und maximal 10° ist.

3. Kippbarer Halter für Wischgerät entsprechend Anspruch 1, **dadurch gekennzeichnet, dass** es sich bei dem langen vorstehenden Teil (6) um eine Ausbauchung (7) handelt, wenn der Winkel zwischen dem ersten Abschnitt und dem zweiten Abschnitt 0° beträgt.

4. Kippbarer Halter für Wischgerät entsprechend Anspruch 2, **dadurch gekennzeichnet, dass** es sich bei dem langen vorstehenden Teil (6) um eine Kombination aus dem Steg und einer auf dem Steg angeordneten Ausbauchung (7) handelt.

Revendications

1. Structure de balai laveur inclinable pour nettoyer les sols, etc. comprenant une plaque allongée (1) qui, avec sa face inférieure pourvue d'un tissu de nettoyage (8), est prévue pour être poussée vers l'avant et tirée vers l'arrière par-dessus la surface qui doit être nettoyée, et une poignée allongée (2) jointe de façon articulée (3) au côté supérieur de la plaque (1), **caractérisée en ce que** la face inférieure de la plaque (1) est pourvue d'une saillie longitudinale (6) s'étendant transversalement à la direction avant et arrière pour le balai laveur au cours de l'utilisation afin de diviser la plaque sensiblement au niveau du milieu en une première partie et une seconde partie, de telle sorte que, lorsque la structure de balai laveur est poussée la structure de balai laveur est inclinée de telle sorte que le tissu fourni sur la première partie se trouvera contre la surface alors que la seconde partie sera inclinée vers le haut par-dessus la saillie, et lorsque la structure de balai laveur est tirée la structure de balai laveur est inclinée de telle sorte que le tissu fourni sur la seconde partie se trouvera contre la surface alors que la première partie sera inclinée vers le haut.

2. Structure de balai laveur inclinable selon la revendication 1, **caractérisée en ce que** la saillie longitudinale (6) est un bord entre la première partie et la seconde partie, où ledit bord est un résultat de la première partie agencée avec un angle par rapport à la seconde partie supérieur à 0° et d'un maximum de 10°.

3. Structure de balai laveur inclinable selon la revendication 1, **caractérisée en ce que** la saillie longitudinale (6) est un renflement (7) lorsque l'angle entre la première partie et la seconde partie est 0°.

4. Structure de balai laveur inclinable selon la revendication 2, **caractérisée en ce que** la saillie longitudinale (6) est une combinaison du bord et d'un renflement (7) agencé sur le bord.

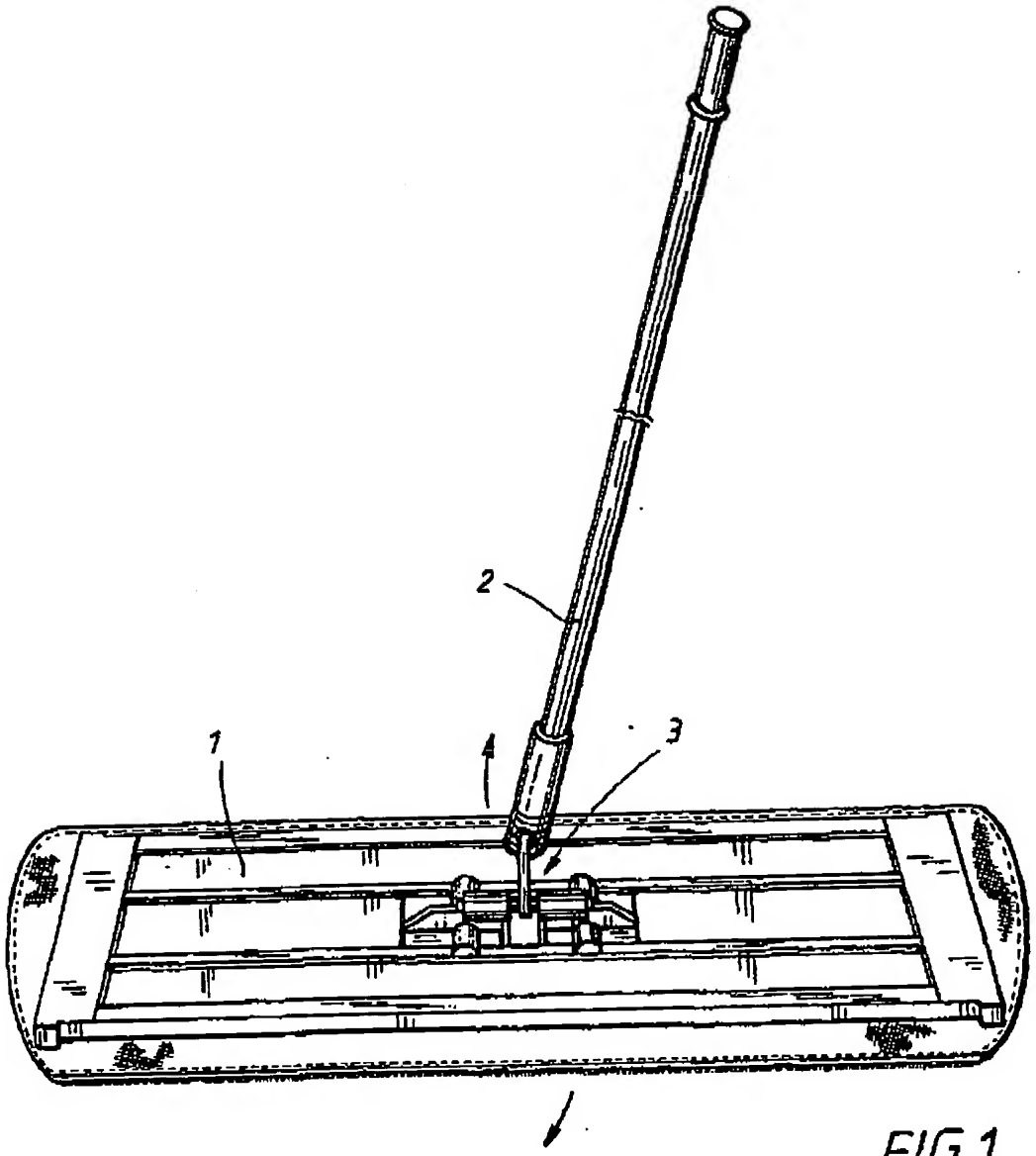

FIG.1

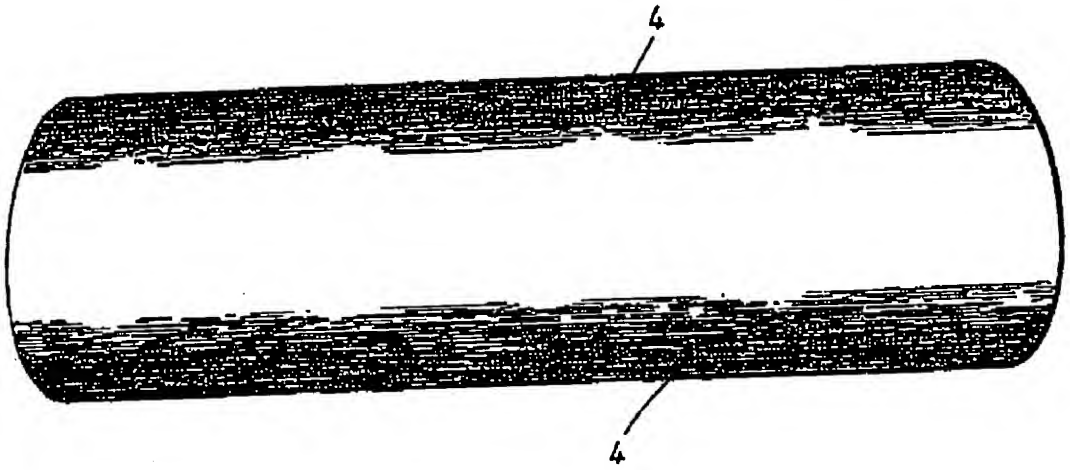

FIG. 2

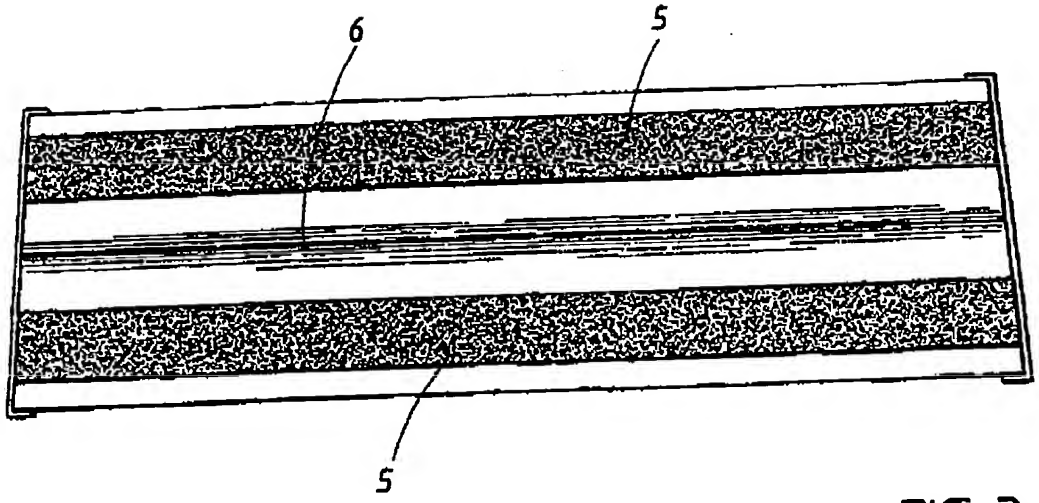

FIG. 3

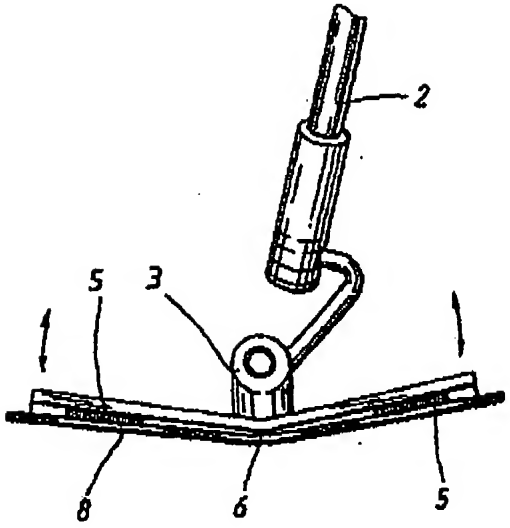

FIG.4

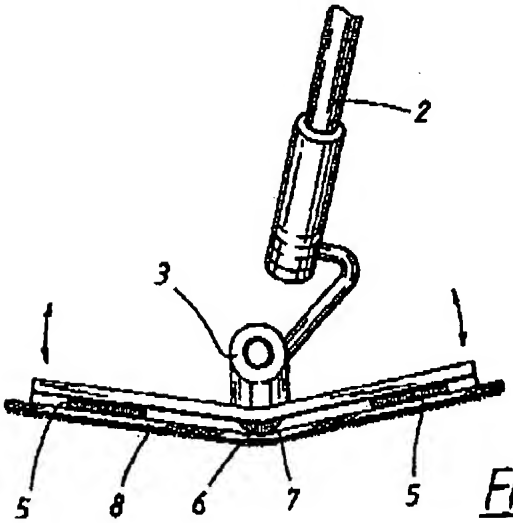

FIG.5